Configuring X.25 on ISDN

You can configure X.25 on ISDN in two ways:

- If the ISDN traffic will cross an X.25 network, you configure the ISDN interface as described in the "Setting Up ISDN BRI Ports" chapter or the "Configuring ISDN PRI" section of the "Configuring Channelized E1 and Channelized T1" chapter of this manual, making sure to configure that ISDN interface for X.25 addressing and encapsulation as described in the "Configuring X.25" chapter of this manual.
- If the D channel of an ISDN BRI interface is to carry X.25 traffic, you configure the feature described in this chapter.

Note As of 11.3(3)T, X.25 on ISDN is also supported using the Always On/Dynamic ISDN (AO/DI) feature. AO/DI uses the Multilink PPP protocol signaling with standard Q.922 and X.25 encapsulations and can additionally use the Bandwidth Allocation Control Protocol (BACP) to optimize bandwidth on demand. For information about how to configure AO/DI, refer to the "Configuring X.25 on ISDN using Always On/Dynamic ISDN (AO/DI)" chapter in this manual.

Basic Rate Interface (BRI) is an Integrated Systems Digital Network (ISDN) interface, and it consists of two B channels (B1 and B2) and one D channel. The B channels are used to transfer data, voice, and video. The D channel controls the B channels.

ISDN uses the D channel to carry signal information. ISDN can also use the D channel in a BRI to carry X.25 packets. The D channel has a capacity of 16 kbps, and the X.25 over D channel can utilize up to 9.6 kbps.

When this feature is configured, a separate X.25-over-D-channel logical interface is created. You can set its parameters without disrupting the original ISDN interface configuration. The original BRI interface will continue to represent the D, B1, and B2 channels.

Because some end-user equipment uses static terminal endpoint identifiers (TEIs) to access this feature, static TEIs are supported. The dialer understands the X.25-over-D-channel calls and initiates them on a new interface.

X.25 traffic over the D channel can be used as a primary interface where low-volume, sporadic interactive traffic is the normal mode of operation. Supported traffic includes IPX, AppleTalk, transparent bridging, XNS, DECnet, and IP.

This feature is not available on the ISDN Primary Rate Interface (PRI).

For a complete description of the commands mentioned in this chapter, refer to the *Dial Solutions Command Reference*. To locate documentation of other commands that appear in this chapter, use the command reference master index or search online.

X.25 on ISDN D Channel Configuration Tasks

To configure an ISDN BRI interface (and create a special ISDN interface) to carry X.25 traffic on the D channel, use the following commands beginning in global configuration mode:

Step	Command	Purpose
1	**interface bri** *number*	Specify an ISDN BRI interface.
2	**isdn x25 static-tei** *tei-number*	Specify a static TEI, if required by the switch.
3	**isdn x25 dchannel**	Create a configurable interface for X.25 traffic over the ISDN D channel.
4	See the "Configuring LAPB and X.25" chapter of the *Wide-Area Networking Configuration Guide*.	Configure X.25-over-ISDN interface for X.25 traffic.

The new X.25-over-ISDN interface is called **interface bri** *number***:0** in configuration displays. It must be configured as an individual X.25 interface. For information about configuring an interface for X.25 traffic, refer to the *Wide-Area Networking Configuration Guide*.

Note The **encapsulation x25** command is neither required nor used on this new interface, but other X.25 commands can be used to configure this interface.

If you want to remove the X.25-over-ISDN interface later, use the **no isdn x25 dchannel** command.

X.25 on ISDN D Channel Configuration Example

The following example creates a BRI 0:0 interface for X.25 traffic over the D channel and then configures the new interface to carry X.25 traffic.

```
interface bri0
 isdn x25 dchannel
 isdn x25 static-tei 8
!
interface bri0:0
 ip address 10.1.1.2 255.255.255.0
 x25 address 31107000000100
 x25 htc 1
 x25 suppress-calling-address
 x25 facility windowsize 2 2
 x25 facility packetsize 256 256
 x25 facility throughput 9600 9600
 x25 map ip 10.1.1.3 31107000000200
```